

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-020451**Date Inspected:** 05-Feb-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC) Chanxing Island**Location:** Shanghai, China**CWI Name:** Mr. Qui Wen**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Segment**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA), Vibin Kumar Selvanayaham, was present during the times noted above for observations relative to the work being performed.

Magnetic Particle Testing (MT) – NWIT Document No's: 008314

This QA inspector performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as OBG Segment 13CE. The weld designations reviewed are as follows:

1. DP3108-001-055~058, 075~078, 095~098, 115~118, 155, 157, 159, 161, 163
2. DP3108-001-059, 061, 079~082, 099~102, 119~122, 165, 167, 169, 171, 173

Bay 14

This QA Inspector observed the following work in progress:

Shielded Metal Arc Welding (SMAW) repair welding of weld joint SEG3020D-052 located on Floor Beam to Bottom Plate at panel point 128.3 of OBG Segment 14W. ZPMC Welders are identified as 066038. ZPMC Quality Control (QC) is identified as Mr. Wang Xiang Pin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-2G (2F) – FCM – Repair, which is used as per Critical Welding Repair (CWR) B-CWR-2734-R1.

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SMAW welding of weld joint SEG3020E-058 located on Longitudinal Diaphragm to Floor Beam of OBG Segment 14W. ZPMC Welders are identified as 067765. ZPMC Quality Control (QC) is identified as Mr. Wang Xiang Pin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2214-Tc-U4b-FCM-1.

SMAW repair welding of weld joint SEG3013AA-056 and 058 located on Edge Plate of OBG Segment 13AW. ZPMC Welders are identified as 066002. ZPMC Quality Control (QC) is identified as Mr. Zhang Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-1G (1F) – FCM – Repair, which is used as per Welding Repair Report (WRR) B-WRR-20128.

Flux Core Arc Welding (FCAW) welding of weld joint SEG3014J-010 located on Deck Panel Diaphragm to Floor Beam at panel point 120.5 of OBG Segment 13BW. ZPMC Welder is identified as 066239. ZPMC Quality Control (QC) is identified as Mr. Qui Wen. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2232-ESAB.

FCAW welding of weld joint SEG3014G-010 located on Deck Panel Diaphragm to Floor Beam at panel point 121 of OBG Segment 13BW. ZPMC Welder is identified as 045227. ZPMC Quality Control (QC) is identified as Mr. Qui Wen. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2232-ESAB.

FCAW welding of weld joint SEG3015C-010 located on Deck Panel Diaphragm to Floor Beam at panel point 124.5 of OBG Segment 13CW. ZPMC Welders are identified as 201583 and 067876. ZPMC Quality Control (QC) is identified as Mr. Qui Wen. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2232-ESAB.

SMAW welding of weld joint SEG3014J-002 located on Deck Panel Diaphragm to Longitudinal Diaphragm at panel point 121 of OBG Segment 13BW. ZPMC Welder is identified as 066674. ZPMC Quality Control (QC) is identified as Mr. Qui Wen. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2213-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3014E-002 located on Deck Panel Diaphragm to Longitudinal Diaphragm at panel point 121.5 of OBG Segment 13BW. ZPMC Welder is identified as 037840. ZPMC Quality Control (QC) is identified as Mr. Qui Wen. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2213-Tc-U4b-FCM-1.

FCAW welding of weld joint DP3172-001-074 located on Deck Panel to Deck Panel Diaphragm of OBG Segment 14W. ZPMC Welder is identified as 067888. ABF Quality Control (QC) is identified as Mr. Shen Jian. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2132-ESAB.

SMAW welding of weld joint DP3176-001-120 located on Deck Panel to Deck Panel Diaphragm of OBG Segment 14W. ZPMC Welder is identified as 037779. ABF Quality Control (QC) is identified as Mr. Shen Jian. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2212-Tc-U4b-FCM-1.

SMAW welding of weld joint DP3173-001-069 and 074 located on Deck Panel U-ribs to Deck Panel Diaphragm

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of OBG Segment 14W. ZPMC Welder is identified as 037779. ABF Quality Control (QC) is identified as Mr. Shen Jian. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2213-Tc-U4b-FCM-1.

SMAW welding of weld joint DP3176-001-124 located on Deck Panel to Deck Panel Diaphragm of OBG Segment 14W. ZPMC Welder is identified as 067904. ABF Quality Control (QC) is identified as Mr. Shen Jian. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2212-Tc-U4b-FCM-1.

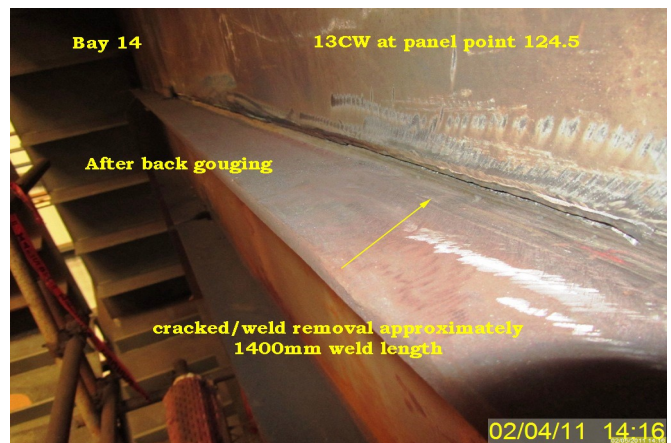
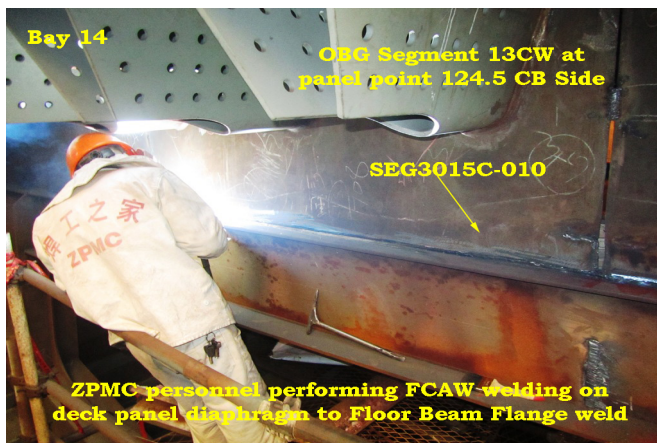
SMAW welding of weld joint DP3177-001-030 located on Deck Panel to Deck Panel Diaphragm of OBG Segment 14W. ZPMC Welders are identified as 067707. ABF Quality Control (QC) is identified as Mr. Shen Jian. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2212-Tc-U4b-FCM-1.

Description of VT Observation:

During the Quality Assurance random visual inspection of welds located on Floor beam, deck panel diaphragm welds at panel point 124.5 of OBG Segment 13CW, this Quality Assurance Inspector (QA) observed the following issues;

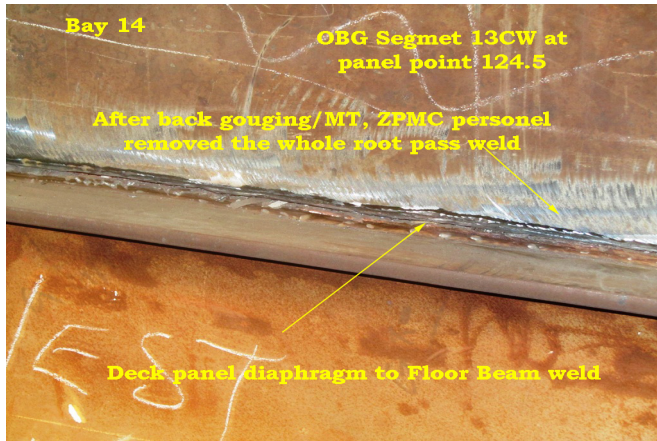
- Linear Longitudinal Indications measuring approximately 1400mm in lengths.
- After back gouging, these indications were discovered visually and confirmed by Magnetic particle Testing (MT) by ZPMC MT personnel.
- The indications are clearly marked on the material near the weld for further repair. The weld number is identified as SEG3015C-010. The panel point is identified as a PP124.5.
- This weld is a CJP weld joining the Deck Panel Diaphragm to Deck Panel Diaphragm.
- The Deck Panel Diaphragm to Deck Panel Diaphragm weld is identified as Seismic Performance Critical Member (SPCM).
- The cracks are completely removed and re-weld shall be performed as per required contract document and approved WPS. For further information, Please see attached pictures

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



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Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

Inspected By: Kumar,Vibin

Quality Assurance Inspector

Reviewed By: Patel,Hiranch

QA Reviewer